

# MURRAY

TYPE - WTE

Pat. No. 2,393,205 — 1946

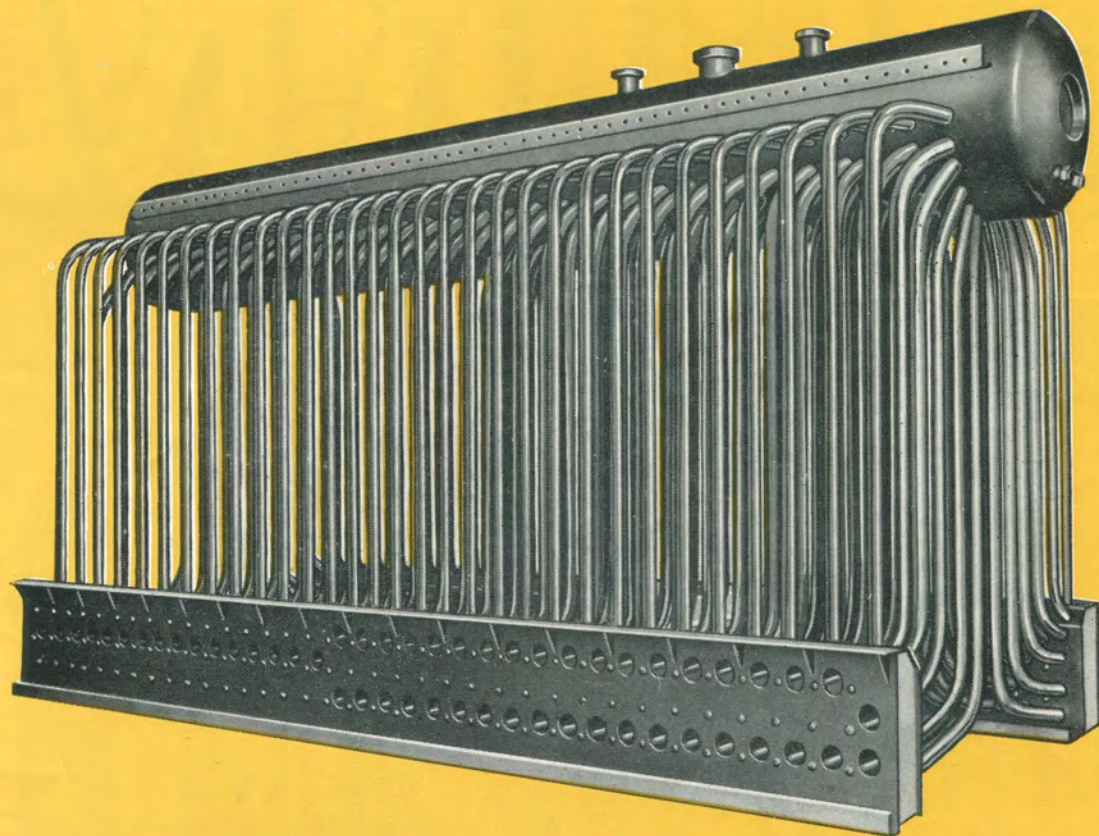


**SINGLE DRUM SIDE HEADER  
WATER TUBE-ENCLOSED BOILERS**

Bulletin B-114

**A self contained unit** (reduces installation costs)  
**No outside suspension needed**

*Constructed in sizes from  
7,800 pounds to 43,000  
pounds steam per hour  
and can be adapted for  
oil, gas or coal firing.*



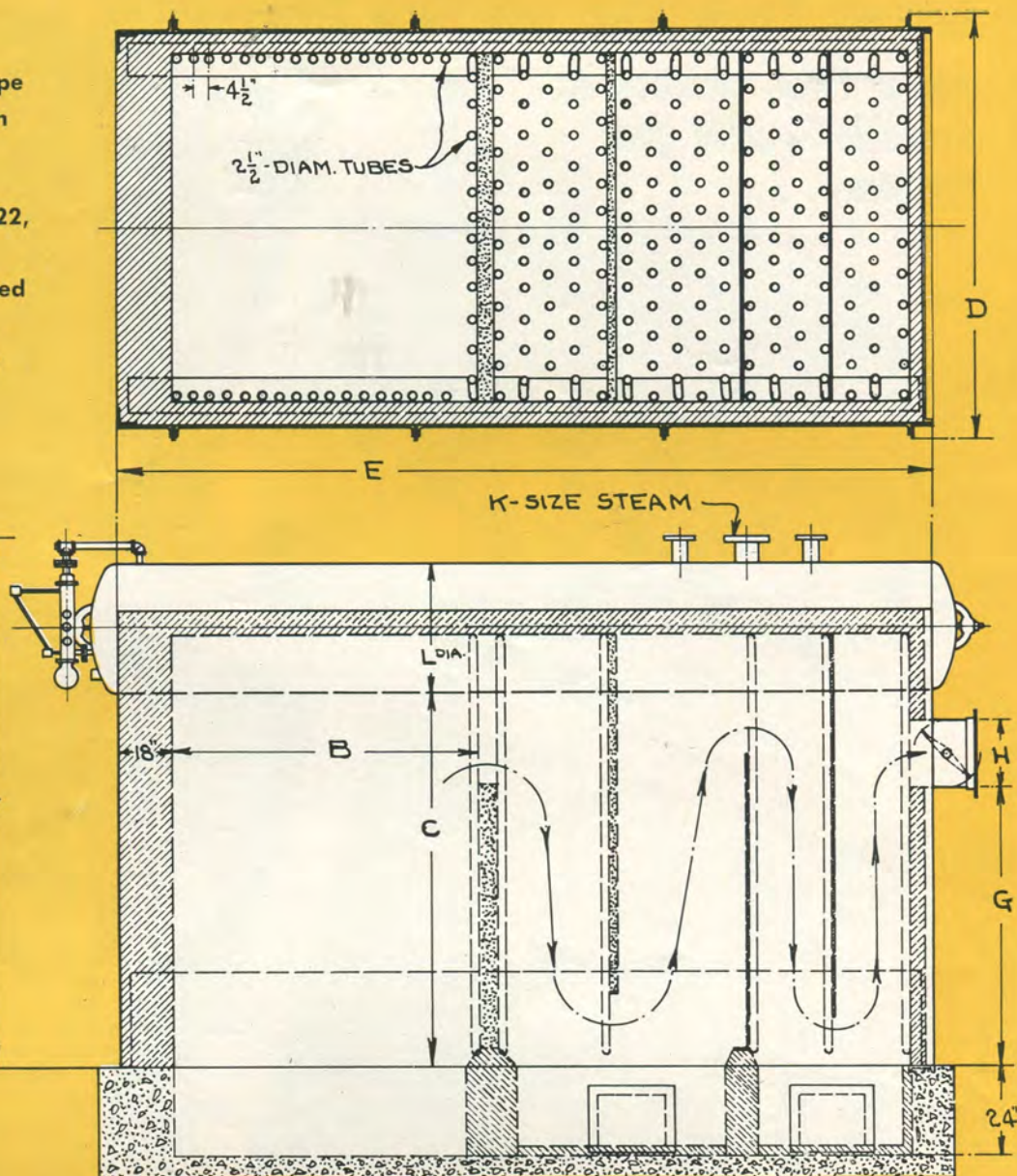
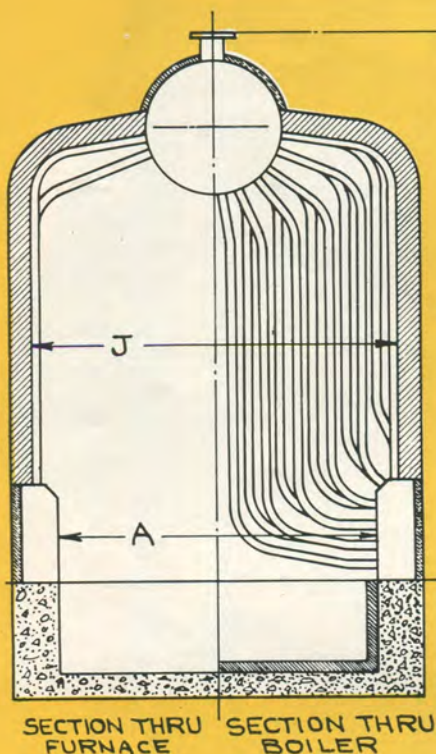
**SH SINGLE DRUM SIDE HEADER TUBE BOILER**

Illustrated above is the flexible type of construction embodied in the type SH Single Drum Side Header Water Tube Boiler. The headers rest on the foundation and the drum is supported on the tube bank, thus eliminating any outside suspension. After complete assembly of the pressure element the necessary refractories, insulation and casing are installed, making it a completely shop assembled unit. Drums and headers are fusion welded, X-rayed and stress relieved and 2½-inch tubes are used throughout.

**MURRAY IRON WORKS CO**

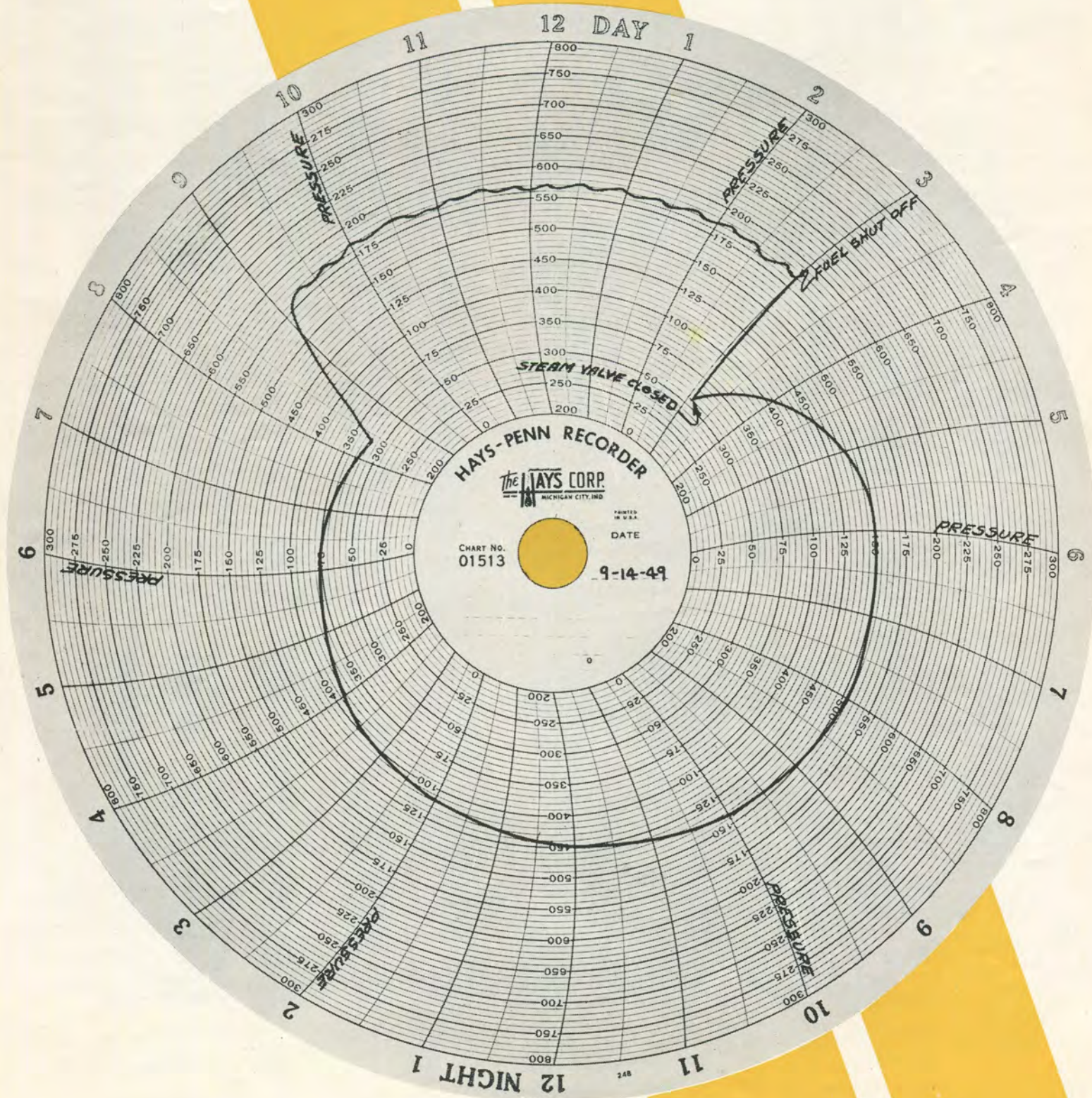
Outline dimensions of Murray Type SH Water Tube Boilers are shown here.

As a rule sizes up to the SH-14-22, or 685 Horsepower, can be shipped completely shop assembled with refractory and insulation in position, thus reducing materially installation costs in the field.

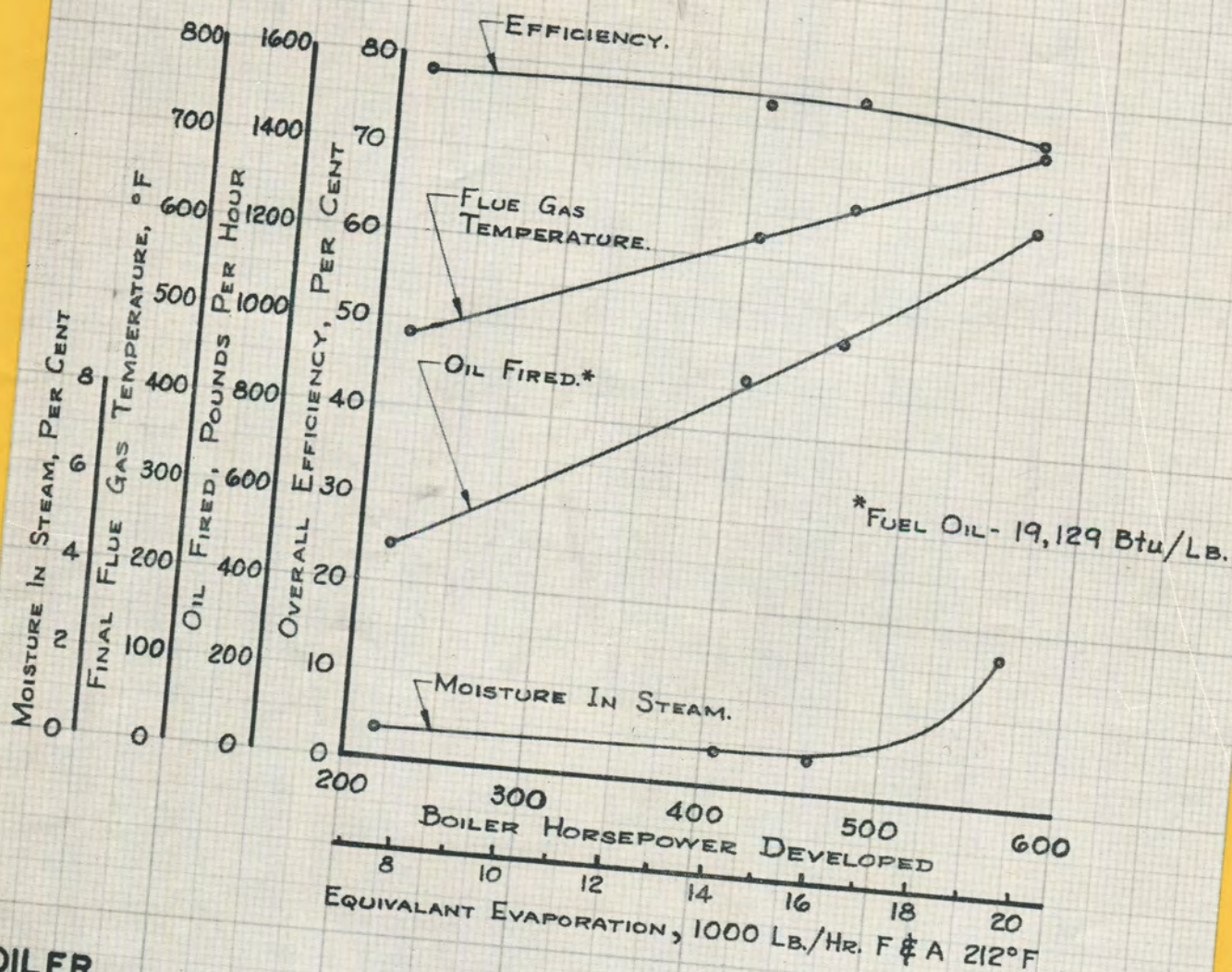


| SERIES SH | HORSEPOWER | A      | B                                    | C      | D                                   | E                                   | F      | G      | H   | J                                   | K  | L   | FURNACE VOLUME CU. FT. | STACK      |             |
|-----------|------------|--------|--------------------------------------|--------|-------------------------------------|-------------------------------------|--------|--------|-----|-------------------------------------|----|-----|------------------------|------------|-------------|
|           |            |        |                                      |        |                                     |                                     |        |        |     |                                     |    |     |                        | OIL FIRING | COAL FIRING |
| 8-12      | 227        | 5'-0"  | 7'-6 <sup>3</sup> / <sub>8</sub> "   | 7'-0"  | 7'-9 <sup>1</sup> / <sub>2</sub> "  | 16'-6 <sup>1</sup> / <sub>8</sub> " | 10'-2" | 5'-6"  | 10" | 6'-1 <sup>1</sup> / <sub>2</sub> "  | 4" | 30" | 327                    | 30"X90     | 34"X100     |
| 10-14     | 327        | 6'-0"  | 7'-10 <sup>7</sup> / <sub>8</sub> "  | 8'-0"  | 8'-9 <sup>1</sup> / <sub>2</sub> "  | 18'-0 <sup>3</sup> / <sub>8</sub> " | 11'-8" | 6'-5"  | 11" | 7'-1 <sup>1</sup> / <sub>2</sub> "  | 4" | 36" | 464                    | 36"X90     | 40"X100     |
| 12-16     | 432        | 7'-0"  | 8'-3 <sup>3</sup> / <sub>8</sub> "   | 8'-6"  | 9'-9 <sup>1</sup> / <sub>2</sub> "  | 19'-6 <sup>5</sup> / <sub>8</sub> " | 12'-2" | 6'-10" | 12" | 8'-1 <sup>1</sup> / <sub>2</sub> "  | 5" | 36" | 593                    | 38"X90     | 42"X125     |
| 12-18     | 484        | 7'-0"  | 9'-4 <sup>7</sup> / <sub>8</sub> "   | 8'-6"  | 9'-9 <sup>1</sup> / <sub>2</sub> "  | 21'-9 <sup>7</sup> / <sub>8</sub> " | 12'-2" | 6'-8"  | 14" | 8'-1 <sup>1</sup> / <sub>2</sub> "  | 5" | 36" | 674                    | 40"X100    | 44"X125     |
| 14-16     | 529        | 8'-0"  | 9'-0 <sup>3</sup> / <sub>8</sub> "   | 9'-0"  | 10'-9 <sup>1</sup> / <sub>2</sub> " | 20'-3 <sup>5</sup> / <sub>8</sub> " | 13'-2" | 7'-0"  | 16" | 9'-1 <sup>1</sup> / <sub>2</sub> "  | 5" | 42" | 782                    | 42"X100    | 48"X125     |
| 14-22     | 685        | 8'-0"  | 10'-10 <sup>7</sup> / <sub>8</sub> " | 9'-0"  | 10'-9 <sup>1</sup> / <sub>2</sub> " | 25'-7 <sup>3</sup> / <sub>8</sub> " | 13'-2" | 6'-10" | 18" | 9'-1 <sup>1</sup> / <sub>2</sub> "  | 5" | 42" | 944                    | 44"X100    | 52"X125     |
| 16-20     | 784        | 9'-0"  | 10'-10 <sup>7</sup> / <sub>8</sub> " | 10'-0" | 11'-9 <sup>1</sup> / <sub>2</sub> " | 24'-5 <sup>5</sup> / <sub>8</sub> " | 14'-2" | 7'-8"  | 20" | 10'-1 <sup>1</sup> / <sub>2</sub> " | 6" | 42" | 1172                   | 48"X100    | 56"X125     |
| 16-24     | 916        | 9'-0"  | 12'-4 <sup>7</sup> / <sub>8</sub> "  | 10'-0" | 11'-9 <sup>1</sup> / <sub>2</sub> " | 28'-3 <sup>1</sup> / <sub>8</sub> " | 14'-2" | 7'-6"  | 22" | 10'-1 <sup>1</sup> / <sub>2</sub> " | 6" | 42" | 1334                   | 52"X110    | 60"X125     |
| 18-24     | 1029       | 10'-0" | 12'-9 <sup>3</sup> / <sub>8</sub> "  | 10'-0" | 12'-9 <sup>1</sup> / <sub>2</sub> " | 28'-7 <sup>5</sup> / <sub>8</sub> " | 14'-2" | 7'-4"  | 24" | 11'-1 <sup>1</sup> / <sub>2</sub> " | 6" | 42" | 1512                   | 54"X110    | 64"X125     |
| 18-28     | 1159       | 10'-0" | 13'-6 <sup>3</sup> / <sub>8</sub> "  | 10'-0" | 12'-9 <sup>1</sup> / <sub>2</sub> " | 31'-8 <sup>1</sup> / <sub>8</sub> " | 14'-2" | 7'-2"  | 26" | 11'-1 <sup>1</sup> / <sub>2</sub> " | 6" | 42" | 1600                   | 58"X110    | 66"X125     |
| 18-30     | 1248       | 10'-0" | 15'-0 <sup>3</sup> / <sub>8</sub> "  | 10'-0" | 12'-9 <sup>1</sup> / <sub>2</sub> " | 34'-3 <sup>7</sup> / <sub>8</sub> " | 14'-2" | 7'-0"  | 28" | 11'-1 <sup>1</sup> / <sub>2</sub> " | 6" | 42" | 1778                   | 60"X110    | 70"X125     |

This is an actual reproduction of a recording meter and indicates the quality of insulation used on this type boiler. After being operated for six hours the burners were shut down and the steam valve opened until the pressure was reduced to 55 pounds. The steam valve was then closed and the pressure increased to 160 pounds, and after eighteen hours was still up to 60 pounds, thus indicating the quality of the setting and heat-retaining qualities.



# PERFORMANCE CURVES MURRAY WATER TUBE BOILER SERIES SH 12-18 OIL FIRED



## **BOILER**

MURRAY IRON WORKS CO., INC.  
SERIES SH 12-18, BOILER NO. 6117  
DESIGN PRESSURE 200 PSIG.  
RATED 16,200 LB./HR. F & A 212°F (MAX.)  
HEATING SURFACE: BOILER 1370 SQ. FT.  
FURNACE 388 SQ. FT.  
TOTAL 1758 SQ. FT.  
FURNACE VOLUME 607 CU. FT.

## **OIL BURNER**

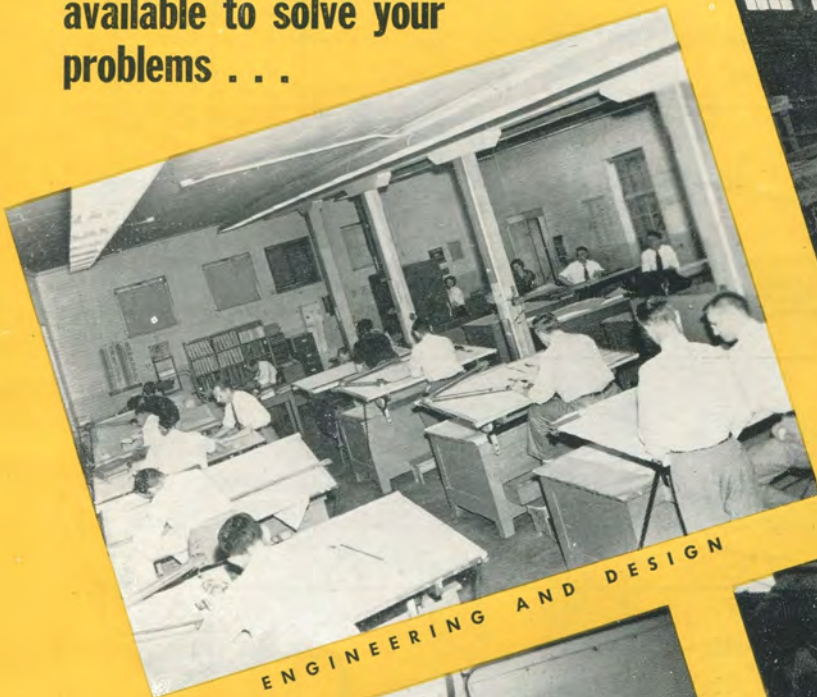
PEABODY ENGINEERING CO.  
FORCED DRAFT REGISTER SIZE A-18  
AIR ATOMIZING BURNER TYPE A  
RATED 1100 LB. OIL/HOUR

SHOP TESTS  
MURRAY IRON WORKS CO., INC.  
BURLINGTON IOWA  
SEPTEMBER 14-16, 1949

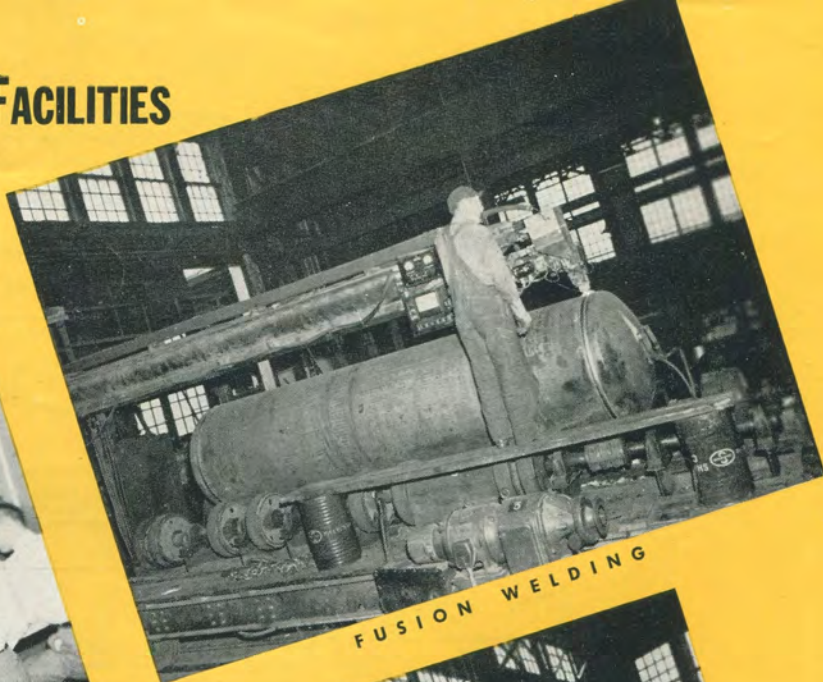
STANLEY ENGINEERING COMPANY  
MUSCATINE  
IOWA

# MURRAY ENGINEERING AND SHOP FACILITIES

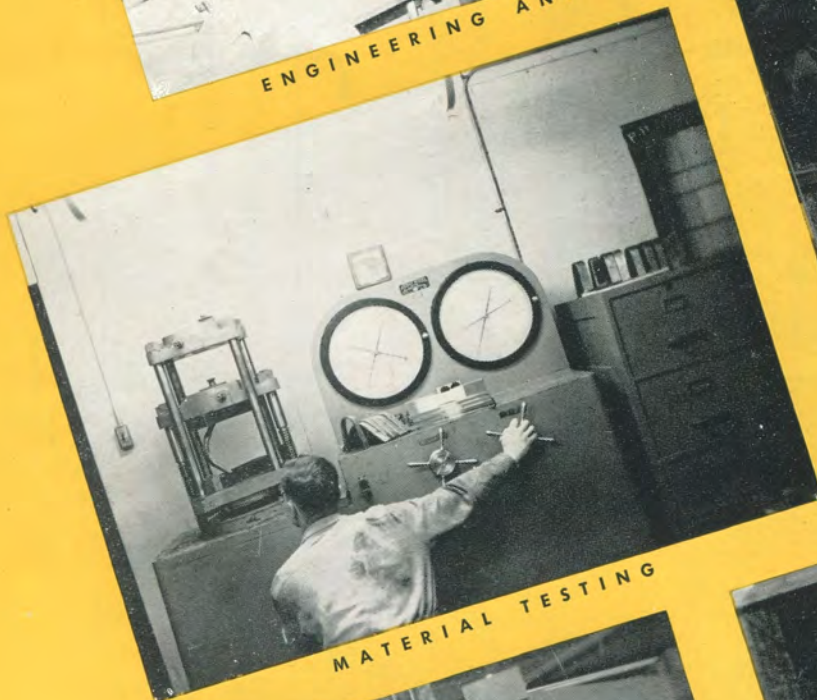
Any of these facilities are  
available to solve your  
problems . . .



ENGINEERING AND DESIGN



FUSION WELDING



MATERIAL TESTING

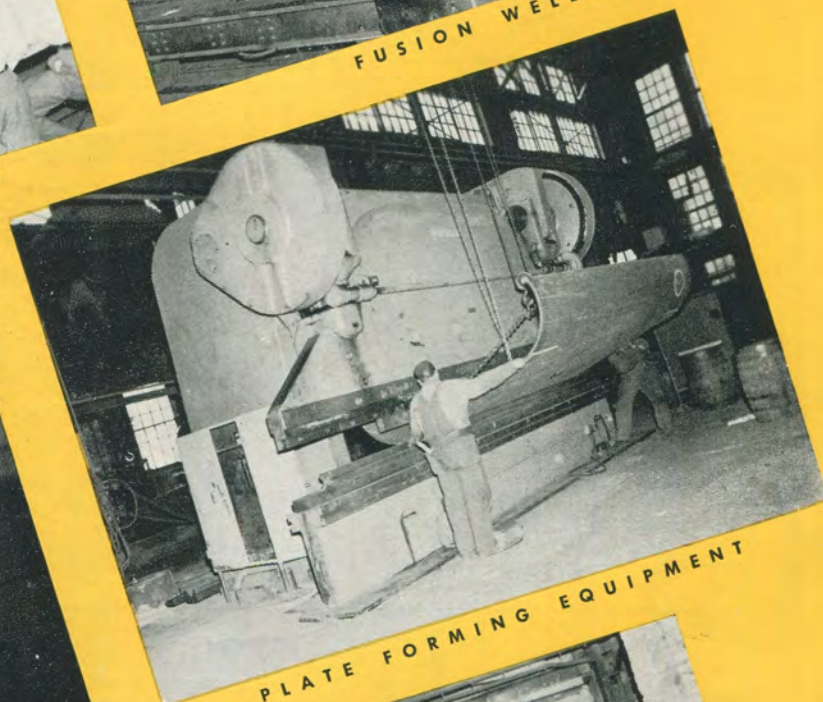
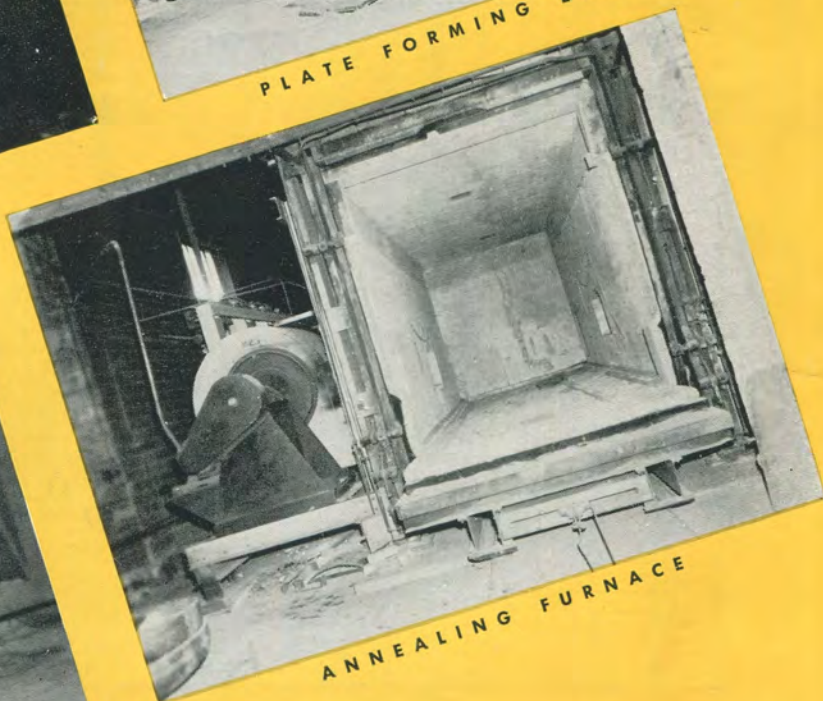


PLATE FORMING EQUIPMENT



X - RAY



ANNEALING FURNACE

INCORPORATED 1870

**MURRAY IRON WORKS COMPANY**  
BURLINGTON, IOWA, U. S. A.